# Chemistry 235 Experiment 2 – Report Sheet

Name:	Lab Room:	Desk #:
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## Pre-Lab Questions (Complete Prior to Lab)

- 1. Consider each of the following solvent pairs. Using Figure 1 in experiment 2, determine whether or not each pair would be a good crystallization solvent mixture.
  - (a) water-hexane
    - Yes or No
  - (b) water-methanol
    - Yes or No
  - (c) pentane-diethyl ether
    - Yes or No
  - (d) toluene-hexane Yes or No
- 2. Dimethylsufoxde (DMSO, bp 189 °C) is an excellent organic solvent, but is not routinely employed in crystallization. Explain why this might be.
- 3. If you perform a recrystallization on 435 mg of impure benzoic acid and recover 360 mg of crystals, what is the percent recovery?
- 4. What will happen if the centrifuge is not properly balanced?

### Experimental Data (Complete During Lab)

Macroscale Recrystallization:

Impure Acetanilide	Mass:	Melting Point:			
Recrystallization Solvent:					
Pure Acetanilide	Mass:	Melting Point:			
Percent Recovery (show work)					

#### Microscale Recrystallization

Impure Naphthalene	Mass:	Melting Point:			
Recrystallization Solvent:					
Pure Naphthalene	Mass:	Melting Point:			
Percent Recovery (show work)					

#### **Post-Lab Questions** (Complete Following Lab)

- 1. List some advantages as well as disadvantages to using the Craig tube crystallization technique.
- 2. What was the purpose of using activated charcoal in this experiment? Did you notice any differences before and after the addition of the activated charcoal?
- 3. Why must the acetanilide be completely dry before obtaining its melting point?
- 4. Why is slow and controlled cooling preferred over rapid cooling?
- 5. How do you know if you happen to use too much recrystallization solvent? If you encounter this problem, what can you do?
- 6. How do the melting points of the impure acetanilide and the recrystallized acetanilide compare?